REMARKS

Reconsideration of the application is requested.

Claims 1-5 remain in the application. Claims 1-5 are subject to examination. Claim 1 has been amended.

Under the heading "Claim Rejections - 35 USC § 102" on pages 2-6 of the above-identified Office Action, claims 1, 4 and 5 have been rejected as being fully anticipated by U.S. patent publication No. 2002/0167528 A1 to Edge (hereinafter Edge) under 35 U.S.C. § 102.

The rejection has been noted and claim 1 has been amended in an effort to even more clearly define the invention of the instant application. More specifically, claim 1 has been amended to recite the feature that the chromatic adaptation transformation includes the step of "converting the absolute color values into receptor signals L, M, S of color receptors by use of matrix multiplication". Support for the changes is found on page 17, lines 6-9 of the specification of the instant application.

Turning now to the prior art, Edge proposes a method for achieving a soft-proof on a display device that provides

an acceptable visual match with the colors on hardcopy printouts (see paragraph [0007]).

Therefore Edge deals with the problem of the different visual appearances of subtractive color mixing as used on hardcopies such as paper and of additive color mixing of the basic colors red, green and blue as used in display devices such as monitors.

This is further illuminated in paragraph [0030] of Edge which states "In particular a display device and a printing device can produce color images that have the same measured XYZ coordinates, yet the images can look virtually different. For example, CRT displays that are calibrated to a D50 illuminant condition look yellow when compared to printed images with the same XYZ coordinates viewed in a D50 illuminant condition."

Therefore the problem described in Edge shows that even if the white points of the display and the hardcopies may have the same XYZ color values they don't have a visual match. Edge does not show any correction with regard to the white points, but does teach a correction of the white point of the display in regard to its visual appearance.

It should be pointed out that Edge does not show a color transformation with regard to a relative colorimetric redering intent (RI) and taking the chromatic adaptation of the human visual system into account but proposes a method to overcome the deficiencies of a display device in regard to a hardcopy. Edge does not show a method using a chromatic adaptation transformation in a color transformation with the above mentioned relative colorimetric RI which includes a conversion of color values to receptor values L, M, S.

Edge proposes a manual way for overcoming the mentioned deficiencies. Therefore Edge proposes that persons trained in the art of color management try to adjust the color settings of the display device for achieving a visual equivalent or a good visual match (see paragraphs [0024] and [0025]).

Edge uses persons not just skilled in the art but persons trained in color management to achieve a better soft-proof This achievement is solely produced by manual and empirical transformations. Therefore the XYZ coordinates of the hardcopy are transformed to transformed Y'X'Z' coordinates and the transformed X'Y'Z' coordinates are again converted to RGB coordinates for presentation on a

display. As shown in Fig. 3 and in paragraph [0034], first a white point of the display is corrected and the chromatic colors are corrected on the display in a second step.

This correction of the appearance of the colors and the white point on the display are achieved by manipulating the underlying device independent color values of the hardcopy. This manipulation is transformed in a way to achieve a better white point on the display and to achieve better colors on the display. Such a manipulation is described in paragraph [0039]. Also for adjusting the visual white point of the display device the phosphor settings of the display can be adjusted as described in paragraph [0046]. Therefore, for achieving an appropriate white and appropriate colors on the display at least two supporting points in regard of the white point and of the chromatic colors are established [0034] and for adjusting the color values between these supporting points the transformation uses matrix algebra [0050] as commonly known for interpolating. Edge receives these supporting points by incrementally adjusting the chromaticities of the working space by a user [0048]. The adjustment of the phosphors are manual steps not using color profiles and are shown in Figs. 4 and 5 as steps (42) & (53).

As stated correctly by the Examiner, Edge shows that the white point is corrected at paragraph [0034]. This means that the white point of the device dependent color space is moved to another point in this color space. This is done for the purpose of achieving a white point having a better visual effect despite of its XYZ values. It is a correction and not a performance of "converting of a relative color value into absolute color values in a ratio corresponding to a ratio of the values of the white point of the first device dependent color space and the white point of the device independent color space" and then again "converting these values to adapted color values in a ratio corresponding to ratio of the values of the white point of the device independent color space and the white point of the second device dependent color space" (as recited in claim 1 of the instant application). Because the white points of the display and the hardcopy are substantially the same in regard to the XYZ values such a conversion would make no sense in view of Edge.
Therefore, Edge proposes a method for correcting a white point of the display device (see paragraph [0009]).

Therefore Edge shows a method for changing a white point of a color space and adapting the color values of this

color space accordingly. As Edge shows in paragraph [0049], the chromaticities are corrected. This is done by hand (manually). This is a correction of chromaticities and this is not a determination of chromatically adapted color values as described in claim 1 of the instant application. Therefore, by determining the chromatically adapted color values from the absolute color values by way of chromatic adaptation transformation as proposed in claim 1 of the instant application a new color transformation can be established and there is no correction of a white point in the second color space or a correction of the chromaticities but there is a role for converting colors from a first color space to a second color space. The second color space as is, is not corrected as proposed by Edge. The correction of a second color space, for example would mean to use different inks or, as in Edge, would result in setting the phosphor settings of the display (see paragraph [0046]). Therefore, Edge does not show a method of transforming color values of a first device dependent color space into color values of a second device dependent color space but shows a correction of the second device dependent color space.

Since Edge corrects the second device dependent color

space, Edge does not show how to achieve the chromatically adapted color values by way of a chromatic adaptation transformation. The transformation of Edge for achieving corrected chromaticities is achieved by hand.

Therefore, for pointing out even more clearly that the invention of the instant application is in regard to a transformation and for achieving chromatically adapted color values for using these color values in this transformation, claim 1 has been amended to recite that there is a conversion of the absolute color values into receptor signals L, M, S of color receptor and that this conversion is made mathematically by the use of matrix multiplication. Since everything is done by hand by Edge all these features making use of converting and transforming color values are not disclosed in Edge.

Since Edge does not teach that a) the chromatic adaptation transforming includes the step of converting the absolute color values into receptor sensor signals, and b) a method of transforming color values of a first device dependent color space into color values of a second device dependent color space, but rather teaches a method for correcting the second device dependent color space for achieving white point and chromaticities in the second color space

that are visually matching the color space of a hardcopy by use of a person trained in color management, Edge does not anticipate the features of amended claim 1 of the instant application.

Under the heading "Claim Rejections - 35 USC § 103" on pages 7-8 of the above-identified Office Action, claims 2-3 have been rejected as being obvious over Edge in view of the article by Graham D. Finlayson et al. (IS&T/SPIE Electronic Imaging, SPIE Volume 4300, January 2001) under 35 U.S.C. § 103.

Claims 2 and 3 depend from amended claim 1. Amended claim 1 is believed to be allowable, and therefore, claims 2 and 3 are also believe to be allowable.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

In view of the foregoing, reconsideration and allowance of claims 1-5 are solicited.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner Greenberg Stemer LLP, No. 12-1099.

Respectfully submitted,

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